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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/528,938 | 08/29/2005 | Yonggang Du | CN 020012 | 6589 |

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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| EXAMINER | |
|---|---|
| ZEE, EDWARD | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2435 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/528,938 | DU ET AL. | |
| | Examiner | Art Unit | |
| | EDWARD ZEE | 2435 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *06 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-32 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

**DETAILED ACTION**

1. This is in response to the amendments filed on 10/06/09. Claims 1, 16 and 20 have been amended; Claim 33 has been cancelled; Claims 1-32 and 34 are pending and have been considered below.

***Claim Objections***

2. The amendments filed on 10/06/09 have been considered and are effective at overcoming the previous claim objection(s), and thus have been withdrawn.

***Claim Rejections - 35 USC § 101***

3. The amendments filed on 10/06/09 have been considered and are effective at overcoming the previous claim rejection(s), and thus have been withdrawn.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**5. Claims 1-32 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Stork et al. (6,212,296).**

***Claims 1, 16 and 20:*** Stork et al. discloses a handwriting recognition system, comprising:

a. an input device including a three-dimensional (3D) motion detection sensor that is configured to generate 3D motion data in response to a 3D motion, wherein the 3D motion is touch less with regard to a physical medium [column 2, lines 39-49 | column 3, lines 25-30]; and

b. a recognition device, in communication with the input device, that is configured to receive the 3D motion data and derive corresponding two-dimensional (2D) images for handwriting recognition, based on the 3D motion data [column 4, lines 33-45].

***Claims 2, 17 and 21:*** Stork et al. discloses the system of claims 1, 16 and 20, wherein the recognition device includes means for performing 2D handwriting recognition based on the 2D images [column 8, lines 15-25].

***Claims 3, 18 and 22:*** Stork et al. discloses the system of claims 1, 16 and 20, wherein the recognition device includes:

a. means for calculating corresponding 3D coordinates based on the 3D motion data [column 5, lines 1-20];

b. means for constructing corresponding 3D tracks based the 3D coordinates [column 5, lines 1-20]; and

c. means for deriving the corresponding 2D images from the 3D tracks [column 4, lines 33-45].

***Claims 4, 19 and 23:*** Stork et al. discloses the system of claim 3, 18 and 22, wherein the deriving means includes means for mapping the 3D tracks onto a 2D plane for deriving the 2D images for handwriting recognition [column 4, lines 33-45].

***Claims 5 and 24:*** Stork et al. discloses the system of claims 3 and 22, wherein the recognition device includes means for performing 2D handwriting recognition based on the 2D images [column 9, lines 39-54].

***Claims 6 and 25:*** Stork et al. discloses the system of claims 4 and 23, wherein the calculating means calculates the corresponding 3D coordinates of each sampling point based on the 3D motion data and a selected sampling rate [column 7, lines 5-12].

***Claims 7 and 26:*** Stork et al. discloses the system of claims 6 and 25, wherein the recognition device further includes means for dynamically adjusting the sampling rate based on the speed of the motion [column 5, lines 45-50].

***Claims 8 and 27:*** Stork et al. discloses the system of claims 6 and 25, wherein the deriving means includes means for deriving the 2D plane as a plane to which the sum of the distance square of each sampling point is minimal [column 7, lines 12-25].

***Claims 9 and 28:*** Stork et al. discloses the system of claims 3 and 22, wherein the input device further includes a control circuit, responsive a user's command, that is configured to generate a control signal for transmitting to the recognition device to indicate completion of writing a word or a character [column 3, lines 22-30].

***Claims 10 and 29:*** Stork et al. discloses the system of claims 3 and 22, wherein the motion detection sensor measures acceleration of the 3D motion in X, Y and Z axial directions to generate the 3D motion data [column 3, lines 11-21].

***Claims 11 and 30:*** Stork et al. discloses the system of claims 5 and 24, further comprising an output device for displaying final results of the handwriting recognition [column 4, lines 18-24].

***Claim 12:*** Stork et al. discloses the system of claim 1, wherein the input device further includes a control circuit, responsive a user's command, that is configured to generate a control signal for transmitting to the recognition device to indicate completion of writing a word or a character [column 3, lines 22-30].

***Claims 13 and 32:*** Stork et al. discloses the system of claims 1 and 20, wherein the motion detection sensor measures acceleration of the 3D motion in X, Y and Z axial directions to generate the 3D motion data [column 3, lines 11-21].

***Claims 14 and 31:*** Stork et al. discloses the system of claims 1 and 20, wherein the input device wirelessly transmits the 3D motion data to the recognition device [column 2, lines 31-39].

***Claims 15 and 34:*** Stork et al. discloses the system of claims 1 and 20, wherein the recognition device includes means for performing 2D handwriting recognition based on the 2D images [column 8, lines 15-25].

### *Response to Arguments*

6. Applicant's arguments filed 10/06/09 have been fully considered but they are not persuasive.

7. **Regarding Claims 1, 16 and 20:** The Applicant argues that the prior art of record does not disclose "wherein the 3D motion is touch less with regard to a physical medium", as currently recited. In particular, the Applicant notes that Stork et al. does not teach the above limitation.

However, the Examiner respectfully submits that Stork et al. explicitly recites that the invention allows a user to write in air [column 3, lines 25-30], and thus fairly suggests that the 3D motion is in fact touch less with regard to a physical medium such as paper or the like.

Therefore, the Examiner respectfully disagrees and submits that the prior art of record does in fact teach the allegedly deficient feature(s), and thus anticipates the claimed invention.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD ZEE whose telephone number is (571)270-1686. The examiner can normally be reached on Monday through Thursday 9:00AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EZ
January 4, 2010

/Kimyen Vu/

Supervisory Patent Examiner, Art Unit 2435